



FF Form Finisher

Models

FFCD

FFCG

OWNER'S MANUAL

CISSELL MANUFACTURING COMPANY

HEADQUARTERS

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THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

MAN57

8/98

Part No. D0100

WARRANTY

The Cissell Manufacturing Company (Cissell) warrants all new equipment (and the original parts thereof) to be free from defects in material or workmanship for a period of one (1) year from the date of sale thereof to an original purchaser for use, except as hereinafter provided. With respect to non-durable parts normally requiring replacement in less than one (1) year due to normal wear and tear, including, but not limited to, cloth goods, valve discs, hoses, and iron cords, and with respect to all new repair or replacement parts for Cissell equipment for which the one (1) year warranty period has expired, or for all new repair or replacement parts for equipment other than Cissell equipment, the warranty period is limited to ninety (90) days from date of sale. The warranty period on each new replacement part furnished by Cissell in fulfillment of the warranty on new equipment or parts shall be for the unexpired portion of the original warranty period on the part replaced.

With respect to electric motors, coin meters and other accessories furnished with the new equipment, but not manufactured by Cissell, the warranty is limited to that provided by the respective manufacturer.

Cissell's total liability arising out of the manufacture and sale of new equipment and parts, whether under the warranty or caused by Cissell's negligence or otherwise, shall be limited to Cissell repairing or replacing, at its option, any defective equipment or part returned f.o.b. Cissell's factory, transportation prepaid, within the applicable warranty period and found by Cissell to have been defective, and in no event shall Cissell be liable for damages of any kind, whether for any injury to persons or property or for any special or consequential damages. The liability of Cissell does not include furnishing (or paying for) any labor such as that required to service, remove or install; to diagnose troubles; to adjust, remove or replace defective equipment or a part; nor does it include any responsibility for transportation expense which is involved therein.

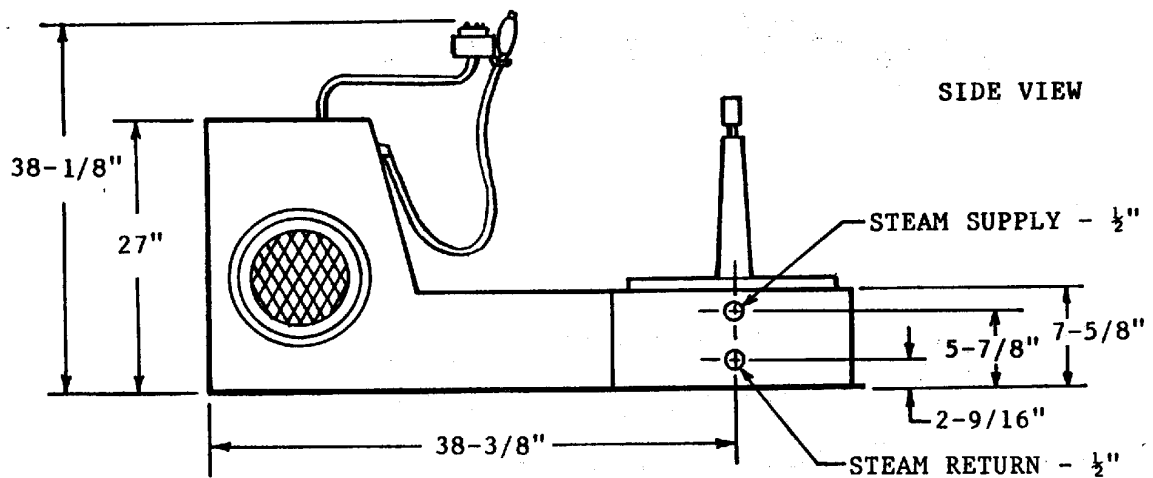
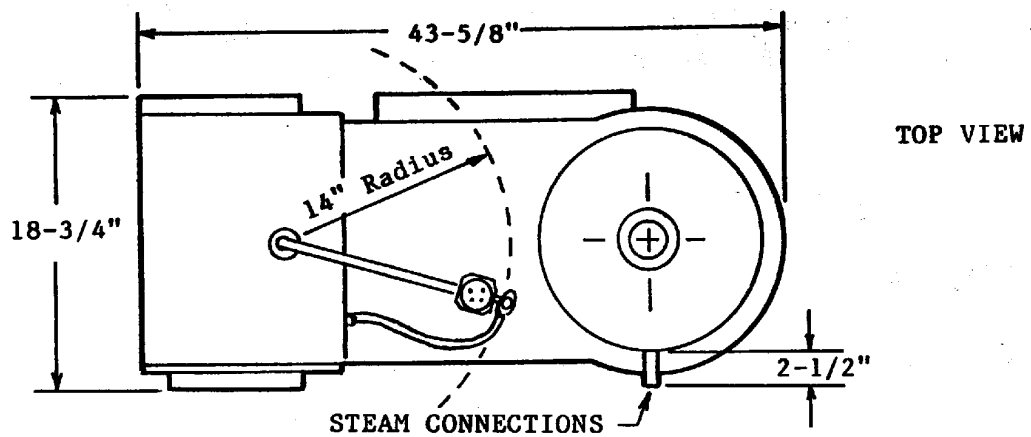
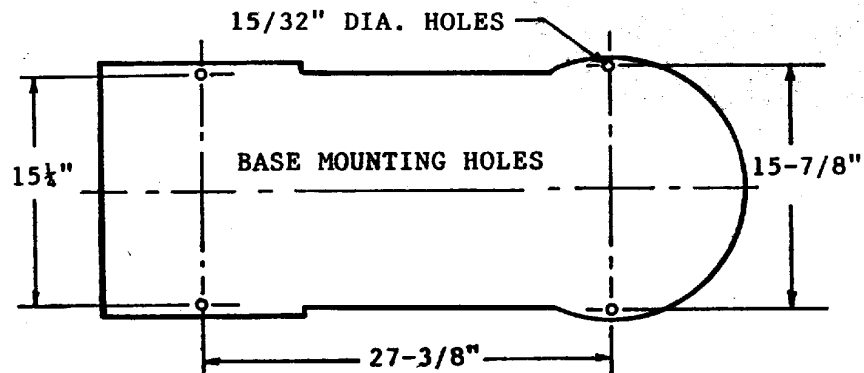
The warranty of Cissell is contingent upon installation and use of its equipment under normal operating conditions. The warranty is void on equipment or parts; that have been subjected to misuse, accident, or negligent damage; operated under loads, pressures, speeds, electrical connections, plumbing, or conditions other than those specified by Cissell; operated or repaired with other than genuine Cissell replacement parts; damaged by fire, flood, vandalism, or such other causes beyond the control of Cissell; altered or repaired in any way that effects the reliability or detracts from its performance, or; which have had the identification plate, or serial number, altered, defaced, or removed.

No defective equipment or part may be returned to Cissell for repair or replacement without prior written authorization from Cissell. Charges for unauthorized repairs will not be accepted or paid by Cissell.

CISSELL MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY, STATUTORY OR OTHERWISE, CONCERNING THE EQUIPMENT OR PARTS INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR A WARRANTY OF MERCHANTABILITY. THE WARRANTIES GIVEN ABOVE ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. CISSELL NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT, ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE MANUFACTURE, USE OR SALE OF ITS EQUIPMENT OR PARTS.

For warranty service, contact the Distributor from whom the Cissell equipment or part was purchased. If the Distributor cannot be reached, contact Cissell.

"FF" FORM FINISHER **LOW BASE OVERALL DIMENSIONS**



SPECIFICATIONS

Cissell Form Finisher includes one set of #11 Sleevers, one set of #24 Sleevers, and two Cissell Vent Clamps. Electric Motor: 1/3 (250 w) HP, 1725 RPM, 115 or 230 Volt, 60 Cycle, AC, Single Phase. Other voltages and currents available.

Operating Steam Pressure 100 P.S.I.G. Max. (6.9 bars)
Boiler HP Approx. 2 (1.5 kw) Depth 57" (145 cm)
Steam Sply. & Ret. 1/2" (1.27 cm) Height 61" (155 cm)
Swinging Radium 19" (48 cm) Width..... 22" (56 cm)
Net Weight 245 lbs. (111 kg)
Approximate Shipping Weights: Domestic 290 lbs. (132 kg)
Export..... 435 lbs. (197 kg)

Export Shipping

Diminsions 61" (155 cm) x 30" (76 cm) x 44" (112 cm)
Cubic Feet Export Crating 46.6 (1.32 m³)

When ordering specify voltage desired.

CISSELL FORM FINISHER - with Taller Revolving Assembly which differs from specifications for standard model given above:

Height 67" (170 cm)
Net Weight Approx. 250 lbs. (113 kg)
Approximate Shipping Weight: Domestic 295 lbs. (134 kg)
Export..... 435 lbs. (197 kg)

Export Shipping

Dimensions 61" (175 cm) x 30" (76 cm) x 44" (112 cm)
Cubic Feet Export Crating Approx. 46.6 (1.32 m³)

THE CISSELL FORM FINISHER IS MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING PATENTS: 2,459,962; 2,736,471; 2,736,472; 2,805,009; 2,998,171; 2,889,969; 2,895,659; 2,948,443; 3,006,516; 3,033,429; 3,051,358; 3,058,635; 3,140,830. OTHER PATS. APPLIED FOR.

NOTE: All dimensions are approximate and may vary with adjustment or the addition of optional equipment. Information in this manual is subject to change without prior notice.

CISSELL FORM FINISHER

GENERAL INFORMATION

UNCRATE FINISHER. Check voltage and current on name plate of motor before installing machine. Electrical Specification of Relay and Solenoid (within junction box on Finisher) must be the same as the motor. Do not remove the plastic protective cover on the Nylon Form until the machine is ready to be placed in operation.

INSTALLATION

SET FINISHER IN POSITION. Grip handle of front and rear clamps and lift revolving form about 22" to remove from base.

STEAM SUPPLY line must fall towards machine (without water pockets.) Connect Finisher to steam supply line with union, globe valve and 12" (or more) riser, as illustrated on reverse side. If Finisher is located at the end of steam line, extend line at least 4 feet beyond machine, and install a by-pass trap and check valve as illustrated in dotted lines; if gravity return, omit trap.

STEAM RETURN line must fall towards boiler (without water pockets). Connect Finisher to steam return line with a swing connection, unions, strainer, trap, check valve and 12" (or more) riser as illustrated on reverse side. Inspect trap carefully for inlet and outlet markings and install swing connection, trap, and check valve as close to machine as possible with trap as close to floor as practical.

Use a separate trap for the Finisher; keep it clean and in good working condition for best performance. If steam line is gravity returned to boiler, omit trap.

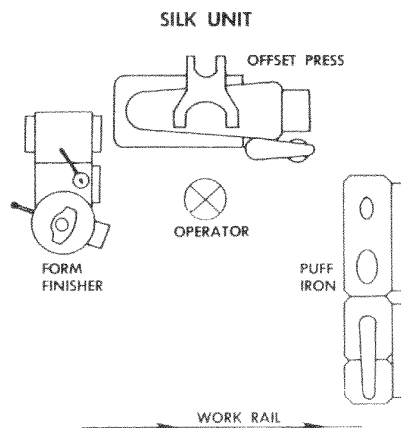
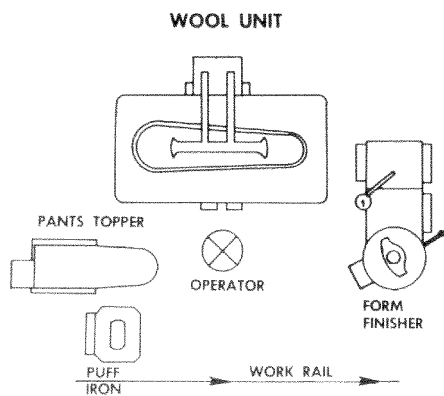
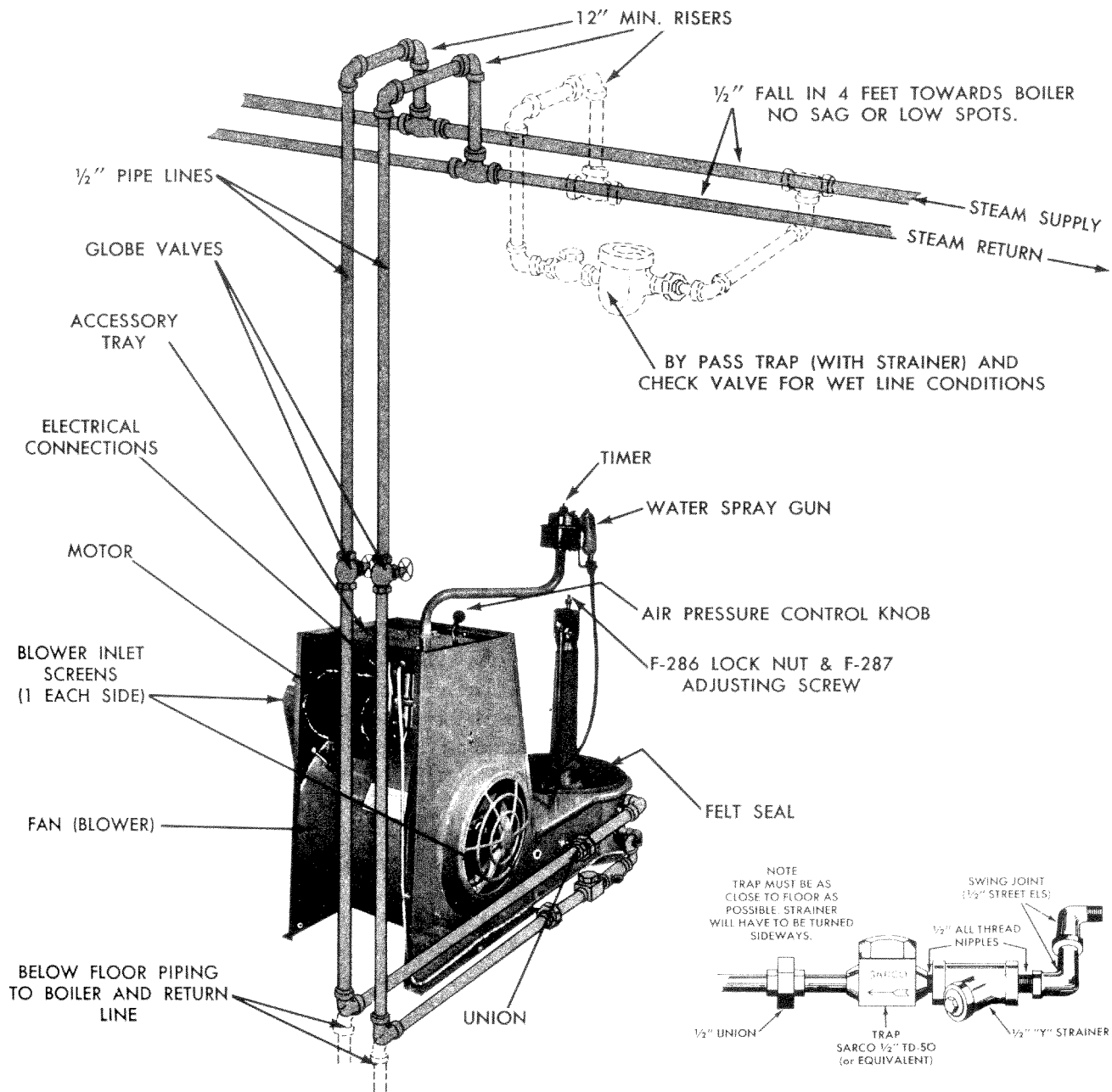
IMPORTANT: Before installing trap and connecting steam return line, open globe valve in steam supply connection and flush pipe dope, borings and other foreign matter, from steam connections and steam chamber within Finisher. Failure to do this may later cause trap trouble.

THE STANDARD Cissell Form Finisher has single phase motors and controls.

MAKE ELECTRICAL CONNECTIONS as indicated on wiring diagram attached to inside cover of electrical junction box on Finisher. Voltage and current of power line must be the same as the Electrical Specifications of the motor, relay and solenoid.

FOR SINGLE PHASE CURRENT (120V), connect the black and white power leads of the Finisher to an approved fused disconnect switch in the power line.

(continued)



TO CONNECT STANDARD, SINGLE PHASE MACHINE TO THREE PHASE CURRENT, connect the black and white power leads of the Finisher to any two terminals of an approved fused disconnect switch in the three phase power line.

IMPORTANT: Consult your local electrical code, before making any electrical connections, and be certain that the electrical installation conforms with all local requirements. Always check wiring before closing the disconnect switch.

Operate the Steam Cycle a couple of times before installing the Revolving Assembly.

OPEN SLEEVE ZIPPERS ON EACH SIDE OF FORM; insert hand through zipper openings, and remove paper between shoulder form and nylon form, which is a protective covering for shipping only. Remove paper covering on front and rear clamps; grip handles of front and rear clamps, and replace revolving form on base. Finisher is now ready for operation.

REMOVE NYLON FORM from finisher at frequent intervals for cleaning, as determined by its soiled condition. WET clean only ... do NOT dryclean. After wet cleaning, the nylon form should be extracted and blown dry on a wind whip. KEEP NYLON FORM CLEAN. Nylon Fabric acts as a filter in operation, collecting dust and lint, etc., which clogs pores of fabric, greatly reducing its efficient operation. FAILURE to keep form clean may cause transfer of soil from form to lining of garments. REPAIR HOLES OR WORN SPOTS in nylon form to extend its useful life; REPLACE when holes or worn spots are beyond repair. A defective or worn nylon form will cause the machine to operate unsatisfactorily.

CAUTION

Use only genuine CISELL FD10 or FG10 replacement Nylon Forms for best results. The fabric for Cissell Nylon Forms is especially woven (and cut to an exact pattern) to give the correct porosity for proper steaming and drying. Remember, your CISELL Form Finisher depends entirely on the Nylon Form for proper operation.

CISSELL FORM FINISHER

MECHANICAL ADJUSTMENTS

ADJUSTABLE LEVERS - Move back and forth to regulate size of nylon form at waist, hip and lower positions. Markings on Index plates enable operator to re-set levers to the exact adjustments for a known garment style or size. Rotate knob on lever clockwise to lock; counter-clockwise 1/4 to 1/2 turn to unlock; move knob forward to increase size of form, reverse movement to decrease. Avoid excessive tightening or loosening of knob as this will delay adjustments and retard production.

WAIST CONTROL - Regulates expansion at waist line --- for finishing short jackets and children's garments.

HIP CONTROL - Regulates expansion at hip line --- for finishing sack coats, medium length jackets, blouses, etc.

LOWER CONTROL - Regulated expansion at bottom --- for finishing topcoats, overcoats, raincoats, etc.

ARM ZIPPERS (on both sides) - Open, for sleeved garments; close, for sleeveless; or adjust between open and closed positions to provide required amount of steam and air within sleeves.

FRONT CLAMP - For clamping front edges of sack coats, jackets, overcoats, housecoats, robes, front-buttoned dresses and blouses, etc.; - raises 5" for smallest child's garment. Front edges must overlap at least 3" with buttons on outside. (Push lever to lock, squeeze trigger to unlock.)

BACK CLAMP - For clamping rear vent of sack coats, jackets, topcoats, raincoats, overcoats, etc., or center kick-pleat in rear panel of skirt. (Push lever to lock, squeeze trigger to unlock.) Separate vent clamp furnished for holding rear vent of extremely short garments.

FORM - Rotates 360° (in either direction) to obtain the most convenient loading position. The back clamp has two "open positions". In the extreme open position, the handle of the back clamp will strike the timer assembly, when rotated 360°. To avoid this, move clamp to intermediate position. Avoid rotating form for each garment, as this is tiresome and will greatly reduce production. It is best for the operator to step from front to rear, as required.

SHOULDER ADJUSTMENT - For adjusting width of shoulder to size of garment. (Rotate knob clockwise to increase width; counter-clockwise to decrease).

CISSELL FORM FINISHER

(Operating Instructions)

Read General Information on Preceding Pages Before Reading Operating Instructions below.

-IMPORTANT-

For best performance, and maximum production, avoid unnecessary adjustments. Finish, in sequence, garments of same size and type. This will eliminate adjusting waist, hip, or lower controls for each garment; increase production, and provide maximum life for the nylon form. Time can also be saved by finishing small garments first, then progressively moving from group to group, until largest size and type is reached.

Selection from unfinished garments may be made by the operator directly from the incoming speed rail, without separate sorting, classifying or grouping. It is best to REDUCE FORM TO ITS SMALLEST SIZE WITH AIR OFF, or with AIR CONTROL in Minimum Setting. Controls can be released easily to allow air to expand form to size of garment with AIR ON.

AIR CONTROL

AIR PRESSURE - can be adjusted, at front of machine, from maximum to minimum, or to any intermediate stage. Markings 1-2-3 help operator to identify air pressure for repeat operations of similar garments.

FOR HEAVY GARMENTS, keep air in maximum position, or adjust to any lower pressure desired during step number 2 under finishing instructions.

FOR SHEER, delicate fabrics, reduce air to minimum or adjust to any higher pressure desired during step number 2 under finishing instructions.

COAT FINISHING

Open Arm Zippers in Nylon Form for All Garments With Sleeves; Keep Closed for Sleeveless Garments.

1. PLACE COAT ON FORM FINISHER. With each hand, grasp front edges of coat lapels just below gored seams. Swing coat over and around form and place coat to hang evenly. STRAIGHTEN COAT - pocket flaps, collar lapels, etc.

Pull two front edges of coat forward; overlap front edges at least 3" from bottom of coat to lapels with buttons on outside; close front clamp. Front clamp raises or lowers 5" to permit proper positioning for long or short coats. Close back clamp on rear vent of topcoats, raincoats, or overcoats. (Place separate vent clamp on rear vent of extremely short garments.)

2. **ADJUST FORM.** Set Timer for continuous operation of air, move air control to minimum setting. Adjust waist, hip, and lower controls as required. Never allow nylon form to be larger than garment. It is unnecessary to adjust hip and lower controls for children's garments or very short jackets; or to adjust the lower control for sack coats or medium length jackets. The control governing the width of the form immediately below the lower edges of the garment is the important adjustment; the control governing the width of the form within the garment is next. Insert expanding sleeve in one sleeve - **POSITION CORRECTLY**. Before inserting second sleeve, step No. 3 may be started.
3. **STEAM AND DRY COAT.** Move Air Control to obtain required pressure. Set Timer for automatic steaming and drying. With Steam on, operator may proceed immediately with touch-up of garment previously removed from form, as steaming and drying is fully automatic.
4. **REMOVE COAT.** With AIR OFF, withdraw sleeves, relieving spring tension while withdrawing. Release front and rear clamps. (Remove coat, and place on hanger or press for touch-up.) If next garment is a smaller size, reduce form to its smallest size with air off. It is unnecessary to make repeated adjustments for successive garments when they are approximately the same size and type.

PRODUCTION HINTS

In many instances, the nylon form can be expanded only to the inner lining of a garment, when it is smaller than the garment. To solve this problem, adjust hip and lower width controls to the lining, or as large as possible, whichever comes first. Then, during the steam cycle, pull the lower edges of the garment until the entire garment is progressively brought into contact with the form for steaming; then follow with normal drying procedure.

When the front clamp is used on full-nap soft fabrics, interchange the lapels after the initial steaming period and resteam. During the drying cycle, release front (and rear) clamps slowly to avoid impression marks.

**FINISHING
CHAMOIS OR SUEDE LINED GARMENTS
ALSO
HEAVY, HARD-TO-WORK MATERIALS**

The finishing of chamois or suede lined garments, also heavy, and hard-to-work materials, requires the application of full air pressure during the steaming cycle.

When finishing garments of these types, follow the basic procedure outlined under wool finishing -- EXCEPT -- first rotate the air control lever to the position marked - STEAM AND AIR.

For CHAMOIS OR SUEDE LINED GARMENTS, do not operate the Timer for normal, full automatic steaming. Instead, quickly rotate the Timer knob into and out of steam position to give one or two blasts of steam with full air pressures, then follow with the usual automatic drying cycle.

For HEAVY or HARD-TO-WORK FABRICS, rotate Timer knob to steam position, and allow the Timer to give the usual automatic steam cycle with full air pressure, to drive the moisture into the fabric while full air pressure holds the garment in expanded shape.

-IMPORTANT-

WHEN EXTRA MOISTURE IS REQUIRED, USE A WATER-SPRAY GUN during the steam cycle, holding the spray gun about 15" from the garment and allowing the water mist to fall into the steam and onto the fabric. Do not hold the spray gun stationary, but move it back and forth to allow the extra water to fall onto the parts of the garment, as required.

DRESS FINISHING

Open Arm Zippers for All Garments With Sleeves; Keep Closed For All Sleeveless Garments.

1. PLACE DRESS ON FORM FINISHER. Open waist zipper on dress. Grasp shoulders of dress with right hand, and right side of hem with left hand. Slide dress over form in a sidewise, or oblique, motion. Close dress zipper. Do not get in the habit of trying to drop the dress onto the form. This is awkward, tiresome, and will greatly retard production. Overlap front edges of front-opened dresses at least 3" (with buttons on outside and close front clamp). For jackets, blouses, housecoats, robes, etc., follow procedure outlined under wool finishing on preceding page.

2. **ADJUST FORM.** Adjust shoulder to width of dress. **STRAIGHTEN DRESS.** Set Timer for continuous operation of air.
Adjust waist, hip and lower controls as required. Never allow nylon form to be larger than garment. This is especially necessary at hemline and hip. Bias cuts have a tendency to pucker at the front and back seams when these adjustments are too large.
For Sheer or delicate fabrics, reduce air-pressure as described under **AIR CONTROL** at the beginning of "Operating Instructions."
From experience, the operator will soon learn the types of dress sleeves that require the use of the separate expanding sleeves to obtain the best finish.
When expanding sleeves are used, insert sleeve in one sleeve - **POSITION CORRECTLY.** Before inserting second sleeve, step No. 3 may be started.
3. **STEAM AND DRY DRESS.** Set Timer for automatic steaming and drying.
Straighten pocket flaps, collars, cuffs, bows, and various trim during initial part of steam cycle; and observe where further touch-up may be required.
With steam on, operator may proceed immediately with touch-up of dress previously removed from form, as steaming and drying is fully automatic.
4. **REMOVE DRESS.** With **AIR OFF**, open dress zipper; (withdraw sleeves relieving spring tension while withdrawing; release front and rear clamps) and move shoulder to its smallest width. Do not open dress zippers (or buttons) with **AIR ON**, as this may change the shape and natural drape of the dress. Grasp shoulders of dress, lift upward, and slide dress from form in a sidewise, or oblique, motion.
Place dress on hanger or proceed with touch-up. If next dress is a smaller size, reduce form to its smallest size with **AIR OFF**.
It is unnecessary to make repeated adjustments for successive garments, when they are approximately the same size and type.

PRODUCTION HINTS

Plain skirts, particularly corduroy, may be finished on the form finisher similarly to the procedure outlined above by placing the skirt on the lower portion of the nylon form with the waist band at the waist position and; with the arm zipper; of the form closed; or, by holding the waist band taut slightly above the shoulder form with the skirt hanging evenly over the upper portion of the form and with the arm zippers open.

In finishing flared dresses it is sometimes impossible to expand the nylon form to the size of the garment...In such cases, adjust hip and lower width to as large as possible. Then, during the steam cycle, pull the lower edges of the garment until the entire garment is progressively brought into contact with the form for steaming; then follow with normal drying procedure.

When finishing ladies' jackets or small-waisted garments, it is suggested that the operator fasten at least one button above the front clamp to help contain the fullness of the nylon form.

CISSELL FORM FINISHER

INSTRUCTIONS FOR ADJUSTING HEIGHT OF REVOLVING FORM

Should the revolving form “drag” on the Form Finisher base rather than turn freely, the form must be raised.

Conversely, if the revolving form rides too high above the Form Finisher base, permitting steam to escape from the space between the form and base, the form must be lowered.

WHEN AN ADJUSTMENT MUST BE MADE, REMOVE REVOLVING FORM BY SIMPLY LIFTING IT STRAIGHT UP OFF THE FORM FINISHER BASE

PROBLEM: Revolving Form “drags” on base of Form Finisher

TO CORRECT: Loosen Bearing Lock Nut.

Turn Bearing Adjustment Screw COUNTER-CLOCKWISE.

CHECK ADJUSTMENT: Replace revolving form on Form Finisher base. Rotate form. If perfectly adjusted, form will rotate freely and snugly on felt seal around top of base. If form is still too low...or too high...repeat adjustment until it is correct.

PROBLEM: Revolving Form rides too high above Form Finisher base.

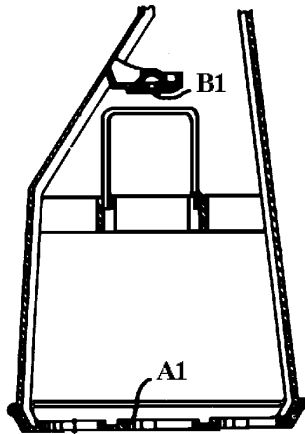
TO CORRECT: Loosen Bearing Lock Nut.

Turn Bearing Adjustment Screw CLOCKWISE.

CHECK ADJUSTMENT: Replacement revolving form on Form Finisher base. Rotate form. If perfectly adjusted, form will rotate freely and snugly on felt seal around top of base. If form is still too high...or too low...repeat adjustment until it is correct.

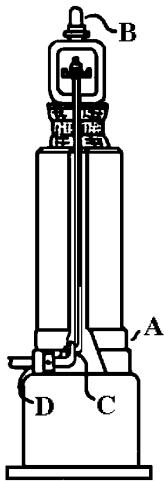
INSTRUCTIONS FOR LUBRICATING BEARING SURFACES WITHIN FORM FINISHER

(Form Finisher Serial No. 1903 To ----)



REVOLVING FORM

- NOTE:** Inspect bearing areas at least every 30 days. If an accumulation of lint is evident, bearing surfaces must be cleaned and lubricated.
- FIRST:** Lift revolving form up and off of steam chamber.
- SECOND:** Sand off old lubricant, or foreign matter, from bearing surfaces A and A1.
- THIRD:** Wipe dust and lint off of surfaces A, A1, B, B1, C and D.
- FOURTH:** Spread DOW CORNING "VALVE SEALA" (Heat Stable Silicon Lubricant) with a piece of cardboard over surface A, and apply to bearing points C and D. With Finger, pack inside of dome above ball bearing B1 with Valve Seal A.

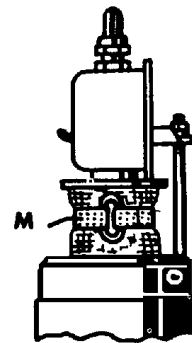
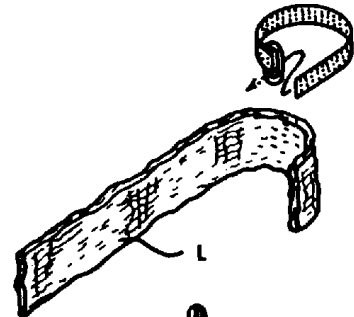


STEAMCHAMBER

TO REPLACE METALLIC STEAM SPREADER

(Form Finisher Serial No. 100 To ----)

- FIRST:** Remove old metallic spreader if it fails to diffuse steam properly.
- SECOND:** Fold new copper mesh "L" over, three times, into approximately a 1 1/2" width band, 18" long.
- THIRD:** Wrap copper mesh tightly around valve body.
- FOURTH:** Place perforated brass draw band with ring "M" around copper mesh. Feed end of band through ring and pull band tight. Fold band back over ring with a pair of pliers to keep band tight.
(For Form Finisher S.N. 100 to ----)



INSTRUCTIONS FOR LUBRICATING BEARING POINTS ON OUTSIDE OF BASE

Wipe bearing surfaces clean and oil with a lightweight oil,
at least every 60 days.

NOTE:

Nylon bearings do not require lubrication.

TO ADJUST STEAM VALVE AND SOLENOID LINKAGE---

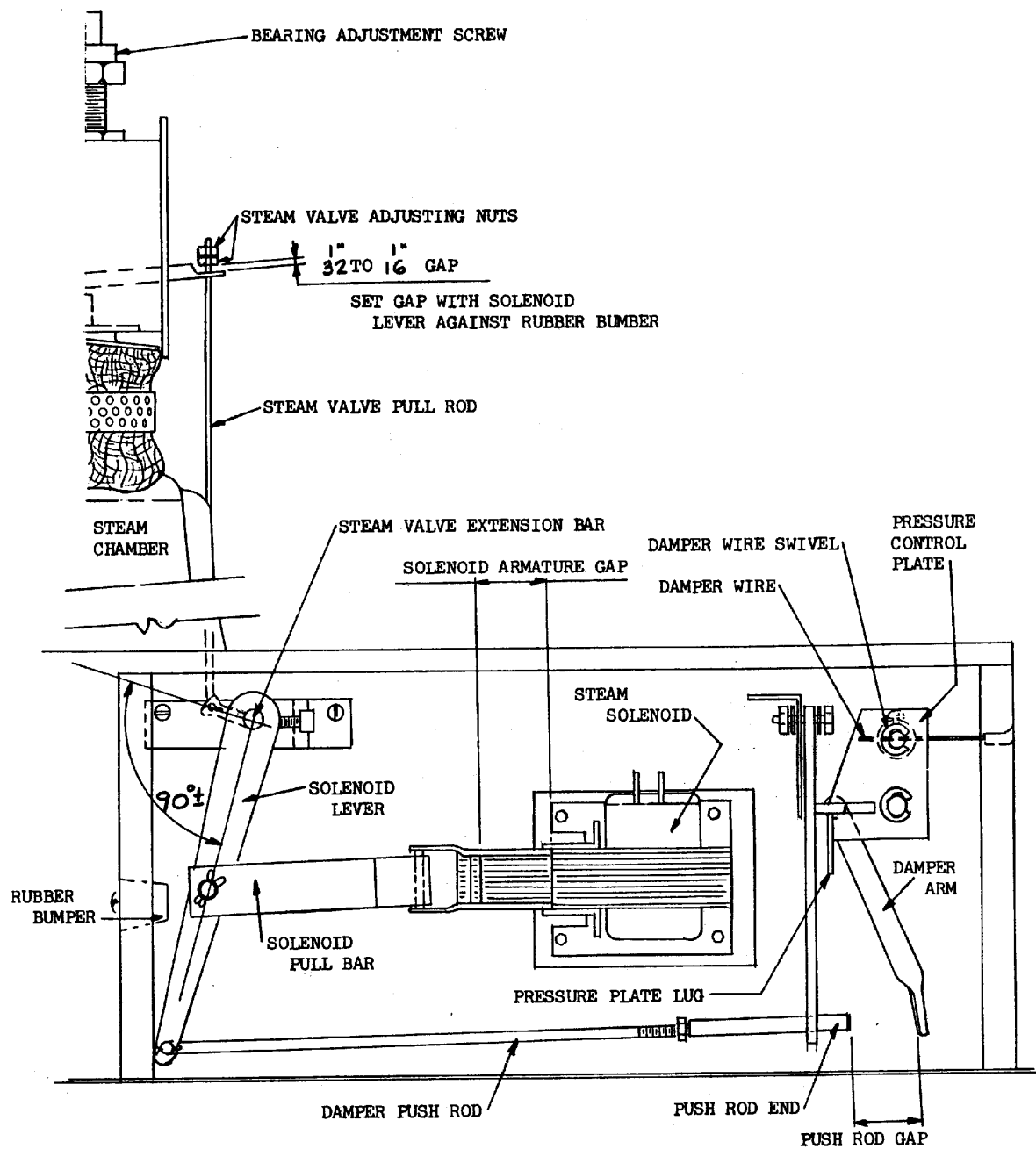
1. Set steam valve extension bar and solenoid lever at approximately 90° as shown and tighten solenoid lever set screw.
2. With solenoid lever against the rubber bumper, adjust steam valve adjusting nuts until 1/32" to 1/16" gap is obtained. Lock the two adjusting nuts tightly together.
3. With solenoid energized (or manually held closed so that solenoid armature gap=0") set the push rod gap at 1/16". Tighten the lock nut against the push rod end.

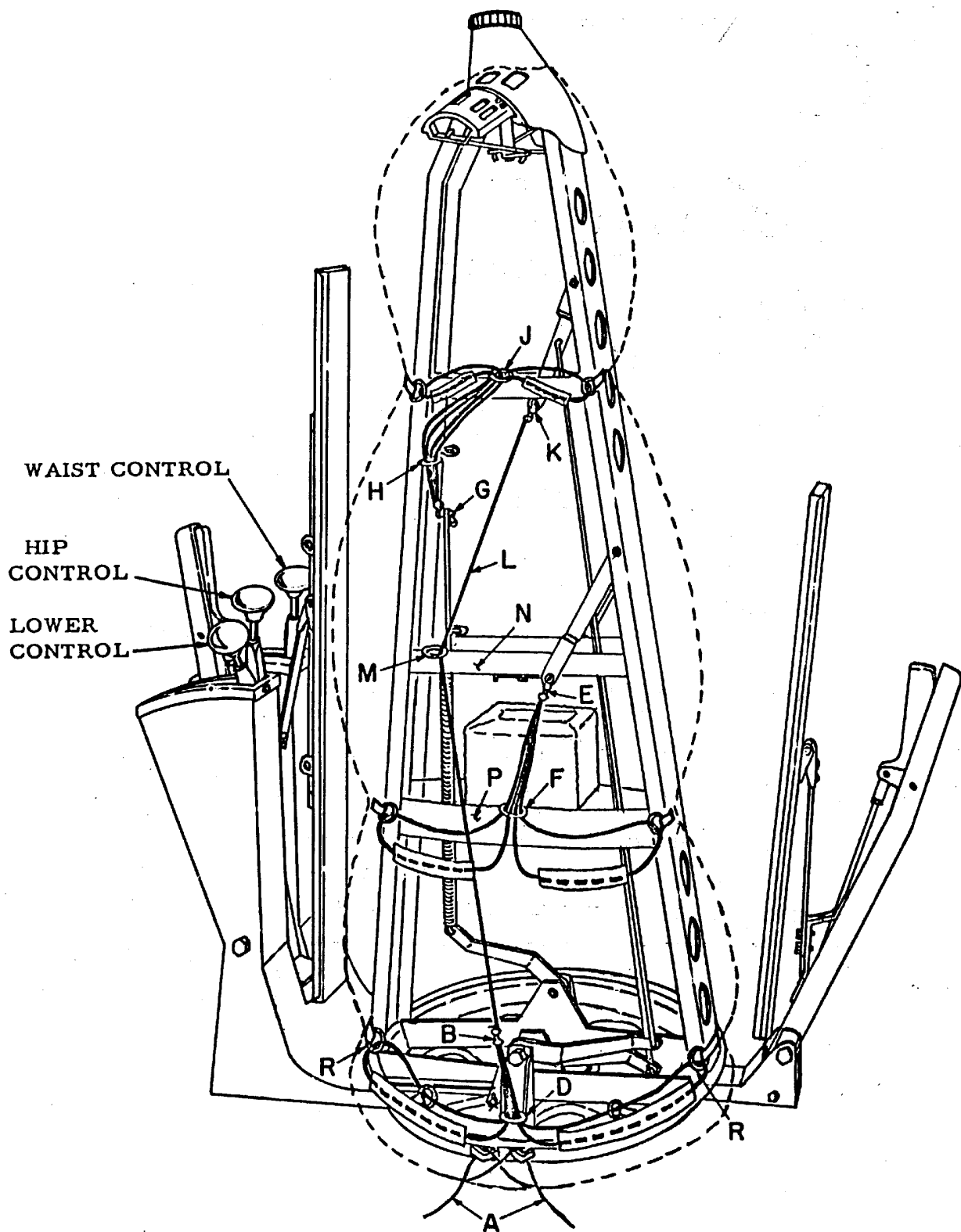
PRESSURE CONTROL ADJUSTMENT

With damper closed (blower motor not running) set the pressure control lever on top of the blower enclosure to minimum air. Loosen the damper wire swivel set screw, position the pressure control plate so that the pressure plate lug is

touching the damper arm, and tighten the damper wire swivel set screw firmly onto the damper wire.

(See drawings on other side)





CISSELL FORM FINISHER
INSTALLATION OF NYLON BAG
and Waist, Hip, and Lower Draw Cables
(Lever Type Controls)
For Form Finisher Serial No. 14,000 to -

TO REMOVE BAG

- FIRST: Lock hip, waist, and lower controls in LARGE position. Untie draw strings (A).
- SECOND: Lift bottom of bag for access to Lower Draw Cable. Snap swivel from bead (B); pull cable from eyelet (D). Repeat procedure on opposite side of bag.
- THIRD: Lift bottom of bag for access to Hip Draw Cable. Snap swivel from bead (E); pull cable from eyelet (F). Repeat procedure on opposite side of bag.
- FOURTH: Lift bottom of bag over shoulder for access to Waist Draw Cable. Snap swivel from bead (G). Repeat procedure on opposite side of bag.
- FIFTH: Lift bag from form.

IMPORTANT

Before installing bag, be certain that single draw cable (L) is connected at (K) and feeds down thru eyelet (M) to position (B). This cable must operate outside of frame (N) and (P). Keep other draw cables to outside of cable (L).

NOTE: If other draw cables get between cable (L) and frame (N) and (P), the lower draw cable will not operate properly.

TO INSTALL NYLON BAG

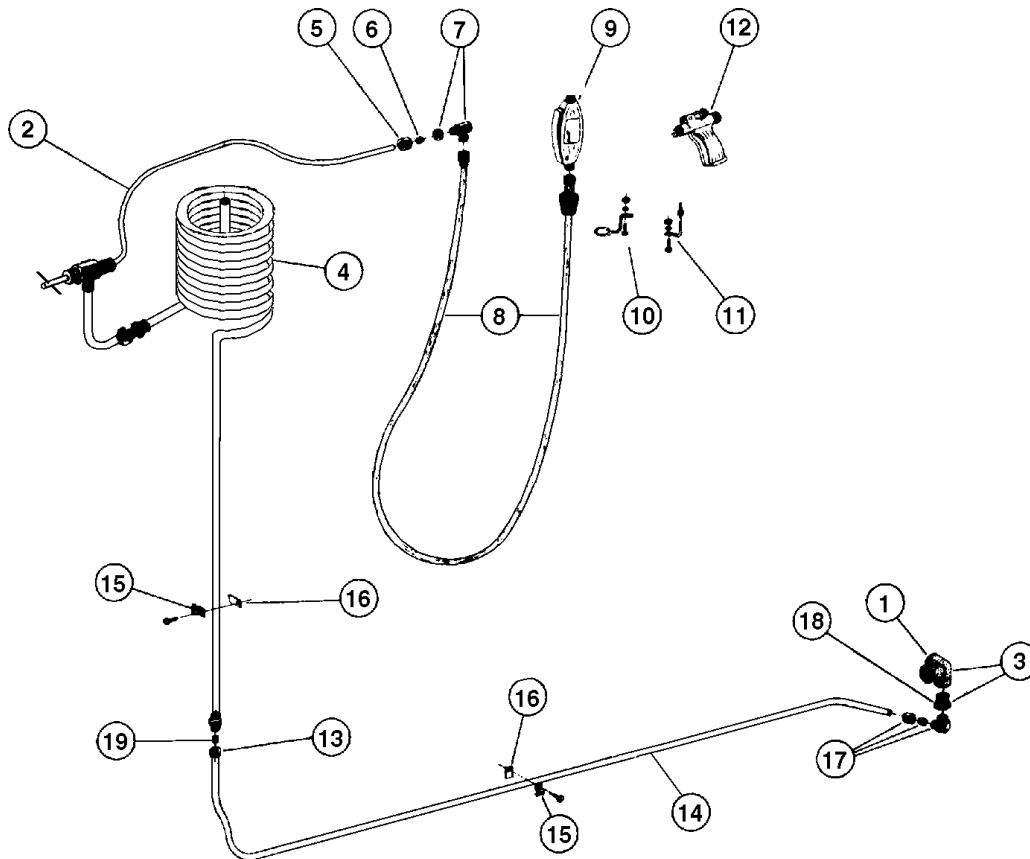
- FIRST: Slip bag over form with Cissell label at front. Be certain that right draw cables within bag hand at right side; left draw cables hang at left side. Move shoulders to maximum width and center bag on form.
- SECOND: Lift bottom of bag over shoulder for access to Waist Draw Cable.
- THIRD: Pull Cable taut and DOWN through eyelets (J) and (H). Snap swivel securely on bead (G). Repeat procedure on opposite side of bag.
- FOURTH: Lower bottom of bag from shoulder for access to Hip Draw Cable. Pull cable taut and UP through eyelet (F). Snap swivel securely on bead (E). Repeat procedure on opposite side of bag.
- FIFTH: Lower bottom of bag for access to Lower Draw Cable. Pull cable taut and UP through eyelet (D). Snap swivel securely on bead (B). Repeat procedure on opposite side of bag.
- SIXTH: Slip bag over rim at bottom of frame. Align and tie draw strings (A) securely. After tying, position ring tapes (R) as illustrated.

IMPORTANT

If nylon bag does not fully expand when controls are in Large position, add extra bead chains (furnished) between couplings to lengthen draw cable. Add necessary beads at (B), (E) or (G), as required.

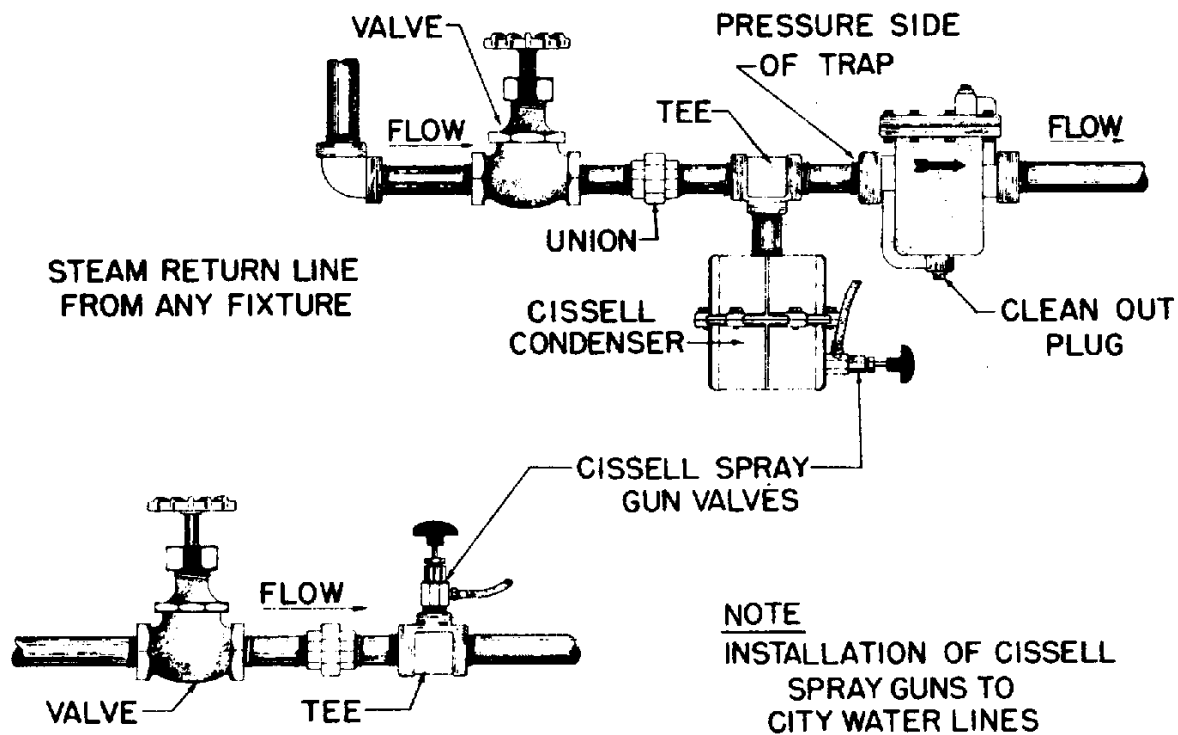
CISSELL WATER-SPRAY GUNS and COIL ASSEMBLY for Form Finisher Parts

WHEN ORDERING PARTS OR MAKING INQUIRY, Specify Machine, Serial Number, Voltage and Current.



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	F574	Side Outlet Elbow 1/2 x 1/2" x 1/2"
2	F1496	1/4" Copper Tubing
3	F573	Bushed Side Outlet Ass'y
4	F1490	Coil Assembly with Addition
5	SU65	1/4" Compression Nut
6	PU8	1/4" Compression Bead
7	F636	Adapter Fitting w/Lock Nut & Hose Adapter
8	SG114	4'-4" Water Hose Ass'y w/rubber bumper
9	SGO43	Water Spray Gun Only (overhead)
10	F590	Water Spray Gun Holder for Overhead Spray Gun w/mtg. hardware
11	F570	Water Spray Gun Holder for Pistol Type Spray Gun
12	SGP42	Water Spray Gun Only (Pistol type) (Specify top outlet)
13	F959	5/16" Compression Nut
14	F1491	Condenser Line
15	F646	Tubing Clamp
16	F647	Backing Plate
17	FG159	90° Compression Elbow w/nut & bead
18	F575	1/2" x 1/8" Pipe Bushing
19	390308250	5/16" Compression Bead (2 each)

INSTALLATION CISSELL WATER-SPRAY GUNS



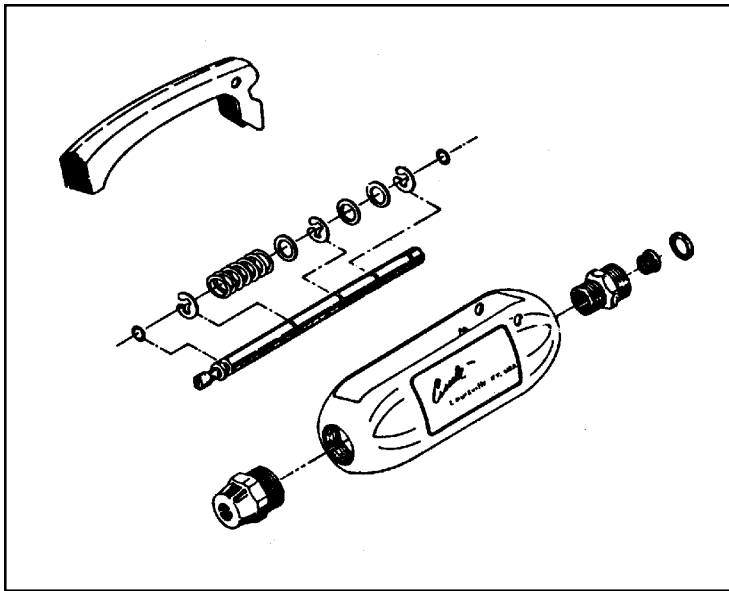
Install the Water-Spray Gun either to the water supply line or steam return line as shown in illustration.

Before connecting water hose assembly to spray gun valve, open valve and allow water to run freely to flush sediment from line or condenser.

Check hose connection to valve and gun and see that SG25 Gaskets are in place. Also, see that strainer is properly installed in hose connection of gun.

The Cissell Water-Spray gun will operate on any pressure from 40 to 100 lbs. without adjustment. It may be connected to a water supply line, or to a Cissell Steam Condenser installed on the pressure side of a steam trap in the steam return line.

When the City water pressure is less than 40 pounds, the Cissell Steam Condenser must be used. Recommended operating pressure, 70 pounds.



Water Spray Gun

Complete Assembly - SG043

Repair Kit - SK043 Consists of:

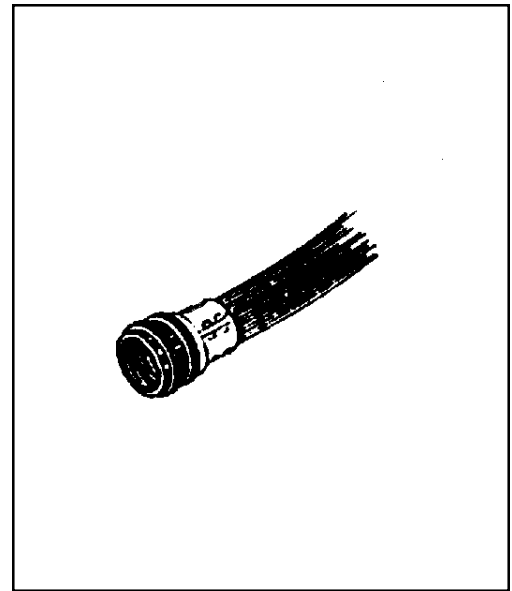
(Parts to repair one spray gun)

Plunger Tube Asm. 1 ea.

Strainer 1 ea.

Nozzle 1 ea.

Gaskets 2 ea.



Water Hose Assembly

Includes fittings, gaskets, and ferrules at each end of hose

<u>Part No.</u>	<u>Description</u>
SG114	4'4" Long
SG37	5' Long
SG68	7' Long
SG115	9'9" Long
SG87	11' Long
SG155	20' Long

WATER SPRAY GUN-PISTOL TYPE

COMPLETE ASSEMBLY - SGP42

REPAIR KIT - SKP42 Consists of parts to repair one spray gun:

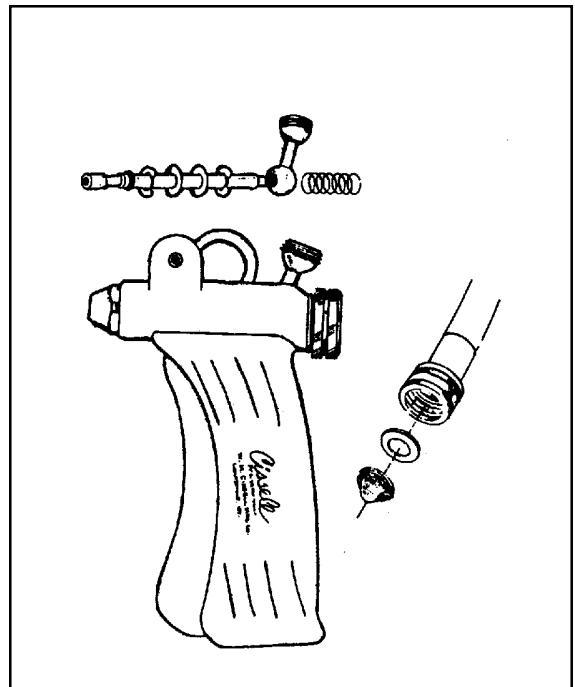
Plunger Tube Asm. 1 ea.

Spring 1 ea.

Nozzle 1 ea.

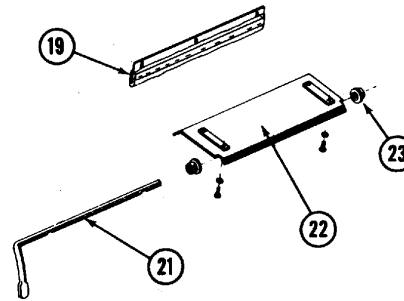
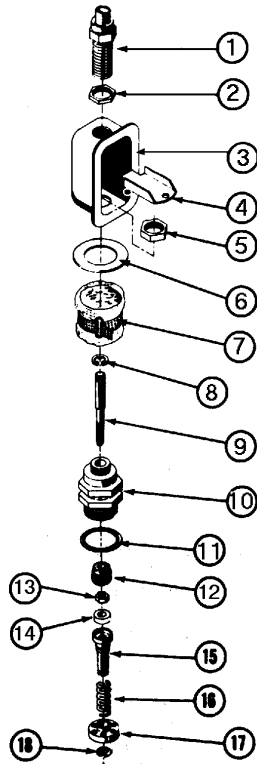
Gaskets 2 ea.

Strainer 1 ea.

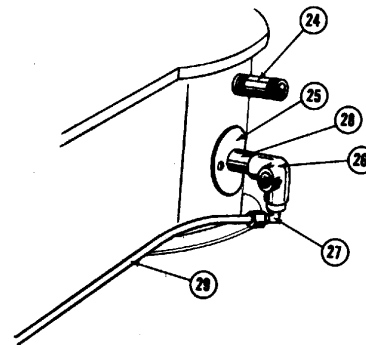


CISSELL FORM FINISHER STEAM VALVE, DAMPER ASSEMBLY & PIPING (LOW BASE) PARTS

WHEN ORDERING PARTS OR MAKING INQUIRY, Specify Machine, Serial Number, Voltage and Current.



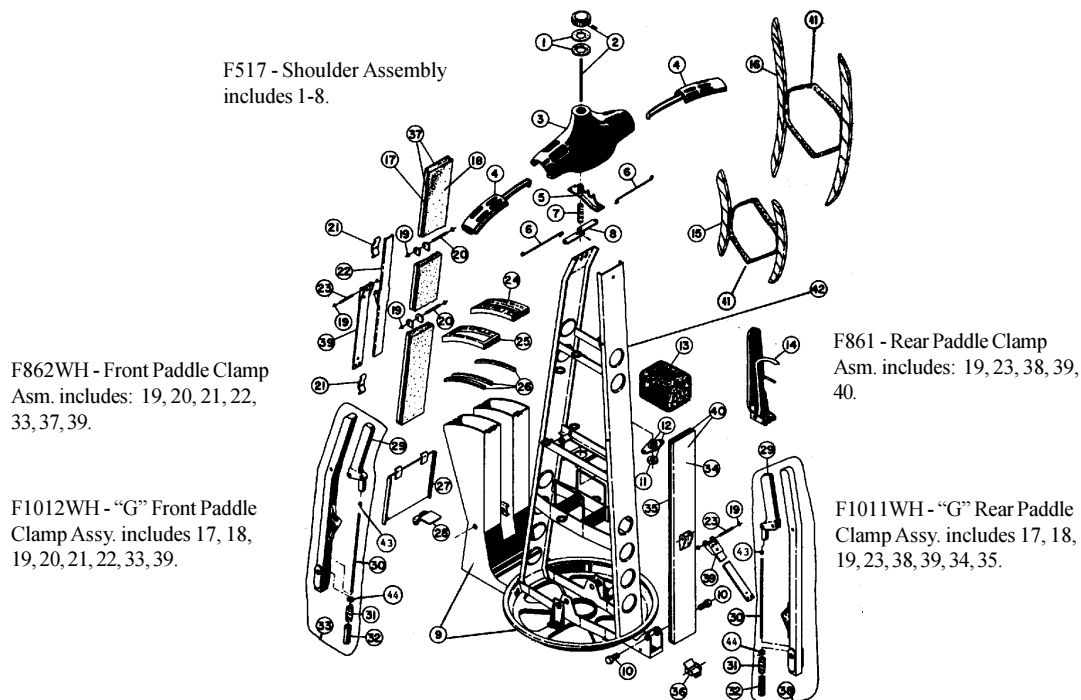
DAMPER ASSEMBLY



PIPING

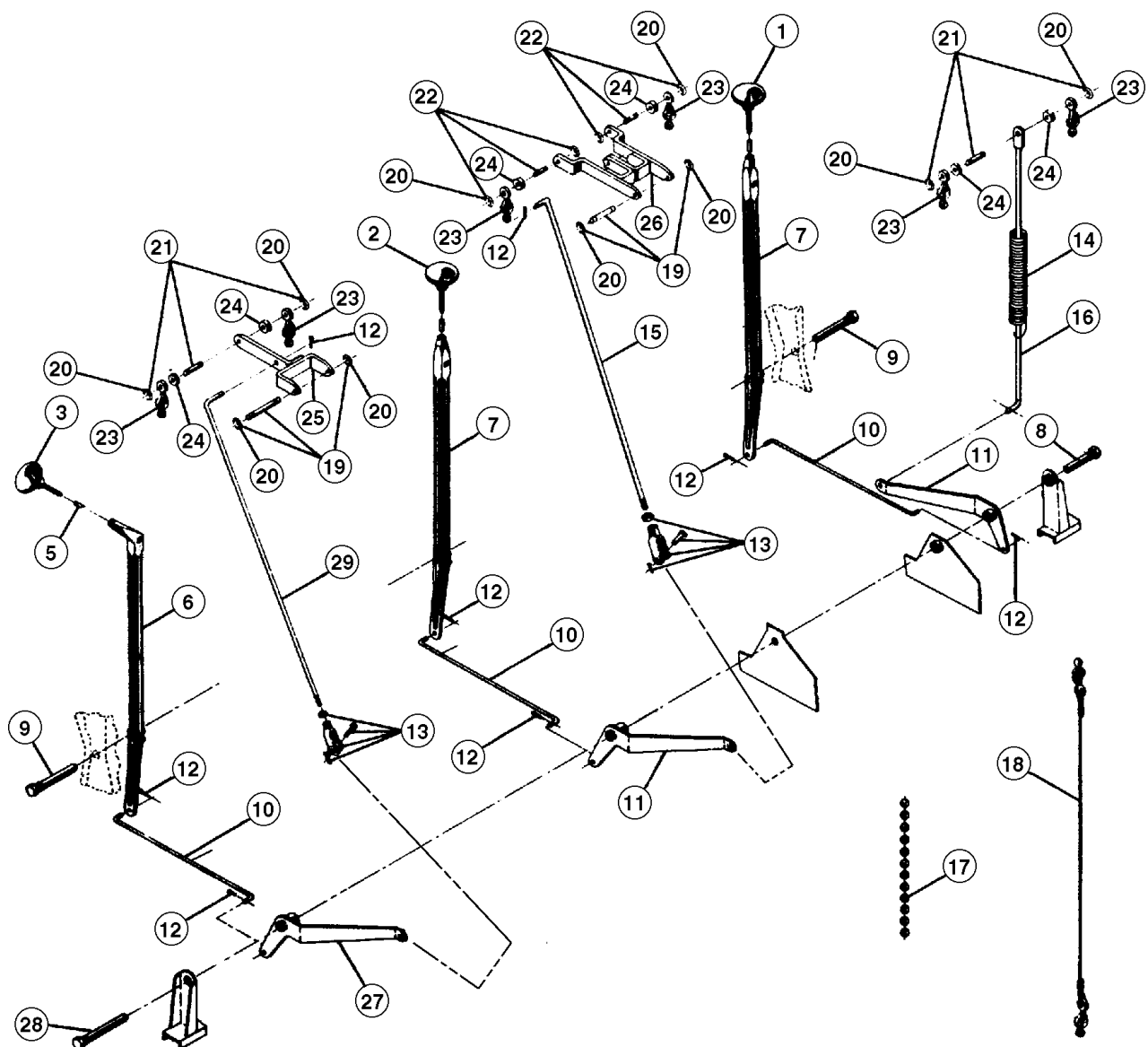
FV-110 STEAM VALVE
(Includes Item Nos. 8 thru 18)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	F-287	Bearing Adjustment Screw	18	F-358	Truarc "E" Ring (Pkg. Of 6)
2	F-286	Bearing Locknut	19	F-231	Upper Adjustable Air Seat w/felt (2 req.) ea.
3	F-285	Bearing Support Box	20	F-745	Damper Rod (for Models FFCD & FFCDG)
4	FV-101	Valve Lever	21	F745	Damper Rod
5	OP547	Large Locknut	22	F-232	Damper
6	FV-106	Collar Retainer	23	F-723	Damper (for Model FMAA)
7	F-18	Metallic Steam Spreader w/Draw Band	24	F-212	Delrin Damper Bearings
8	F-359	Truarc "E" Ring (Pkg. Of 6) (for valve stem)	25	OP-292	1/2" Pipe Nipple 2 1/2" Long (Supply)
9	FV-103	Valve Stem	26	F-225	Spacer Ring
10	FV-100	Valve Body	27	F-573	Bushed Side Outlet El 1/2" x 1/2" x 1/8"
11	P-103	Copper Tin Clad Gasket (Pkg. Of 6)	28	OP-224	90° Compression El, 5/16" tube x 1/8" pipe
12	V-36	Renewable Valve Seat	29	F-226	1/2" pipe nipple 7" long (return)
13	V-15	Small Lock Nut (Pkg. Of 6)		F-883	5/16" O.D. x 62 1/2" tubing for condenser
14	V-16	Teflon Disc			
15	FV-104	Valve Disc Holder			
16	V-330	Spring (Pkg. Of 6)			
17	FV-105	Valve Spring Retainer			
	K451	Repair Kit for FV111 Valve (consists of part #'s FV103, P103, V36, V15, V16, V330, 4F358)			



REVOLVING FORM ASSEMBLY

<u>F22 - "D" Model</u>			<u>F1007 - "G" Model</u>		
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	F192	Insulating Gasket	25	F303	Hip & Lower Index Plate
2	F381	Shldr. Adj. Rod, Knob, & Pin	26	F302	Control Slides
3	F492	Shoulder Form	27	F332	Front Plate
4	F493	Shoulder Extension	28	F333	Front Latch
5	F494	Bearing Plate	29	F104	Trigger Release
6	F336	Shoulder Link	30	F335	Clamp Latch Rod
7	F197	Shoulder Tension Spring	31	F151	Compression Latch Spring
8	F317	Shoulder Lever	32	F137	Latch Plunger
9	F533	Control Box & Pan Assembly	33	F334	Front Handle w/Latch Plunger Spring, Rod Asm. & Trig. Rel.
10	F140	Clamp Bearing Bolt			
12	F289	Cup & Brng. w/bolts, nuts & washers	34	F434	"D" Rear Paddle Only
13	F09	Cloth Steam Spreader		F1014	"G" Rear Paddle Only
14	F842	Vent Clamp (not part of asm.)	35	F435	"D" Sponge Only
15	F11	No. 11 Wooden Sleever		F1019	"G" Sponge Only (3 1/2")
16	F24	No. 24 Wooden Shaver	36	F427	Back Latch
17	F432	"D" Front Paddle Only	37	F436	"D" Front Paddle & Spon. Asm.
	F1016	"G" or "M" Front Paddle	38	F437	Rear Handle w/Latch Plunger, Spring, Rod Asm. & Trig. Rel.
18	F433	"D" Sponge Only			
	F1018	"G" or "M" Sponge Only (42")	39	F218	Clamp Leaf Spring
19	F888*	3/16 "E" Ring (Pkg. of 6)	40	F438	"D" Rear Paddle & Sp. Asm.
20	F240	Clamp Slide Support Pin	41	F63	Cov. Spring Asm. w/Hardware
21	F243	Slide Spring Clip	42	F534	"D" Revolving Form Frame
22	F237	Clamp Slide		F535	"G" Revolving Form Frame
23	F267	Pivot Pin	43	F122	1/4" - 28 Locknut
24	F304	Waist Index Plate	44	P104	Washer (Pkg. of 6)



WAIST, HIP, AND LOWER CONTROLS FOR MODELS "D" & "G"

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	F322	Waist Control Knob	16	F440	Lever Rod - Waist
2	F322	Hip Control Knob	17	040113282	Bead Chain
3	F321	Lower Control Knob	18	F442	Nylon Cord & Beads
5	F300	Spacer for Lower Control	19	F443	2 Pins w/4 E Rings
6	F319	Actuating Lever	20	F888	E Rings Only (Pkg. of 6)
7	F318	Actuating Lever	21	F444	2 Pins w/4 E Rings
8	F377	Bearing Pin	22	F445	2 Pins w/4 E Rings
9	F324	Bearing Pin	23	F446	12 Swivels & Beads
10	F325	Conecting Link	24	F447	6 Spacers
11	F490	Draw String Lever	25	F448	Lower Control Swivel Arm
12	V02	Cotter Pin	26	F449	Hip Control Swivel Arm
13	P39	Yoke, Pin & Cotter Pin	27	F450	Lever
14	F429	Tension Spring	28	F331	Bearing Pin
15	F439	"D" Lever Rod - Hip	29	F451	"D" Lever Rod - Lower
	F1056	"G" Lever Rod - Hip		F1059	"G" Lever Rod - Lower

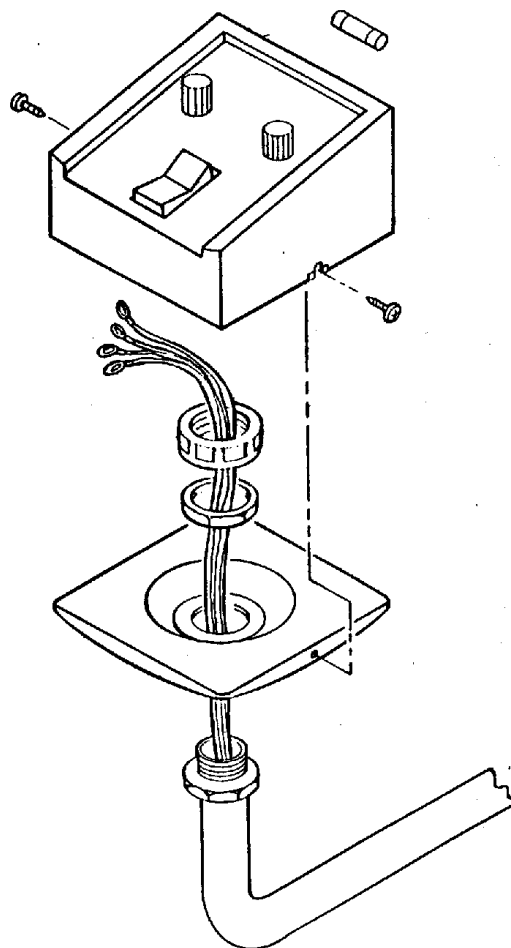
ET240-ELECTRIC TIMER (120/240 V.,50/60 Hz.)

Replaces: ET106/ET1065, ET 1062/ET10625, ET224, ET225, ET230, ET230A

CAUTION: BEFORE INSTALLING, DISCONNECT ELECTRICAL POWER TO MACHINE. ATTACH TIMER TO MACHINE PER INSTRUCTIONS BEFORE RESTORING POWER. DO NOT TAMPER WITH TIMER. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY VOID THE WARRANTY.

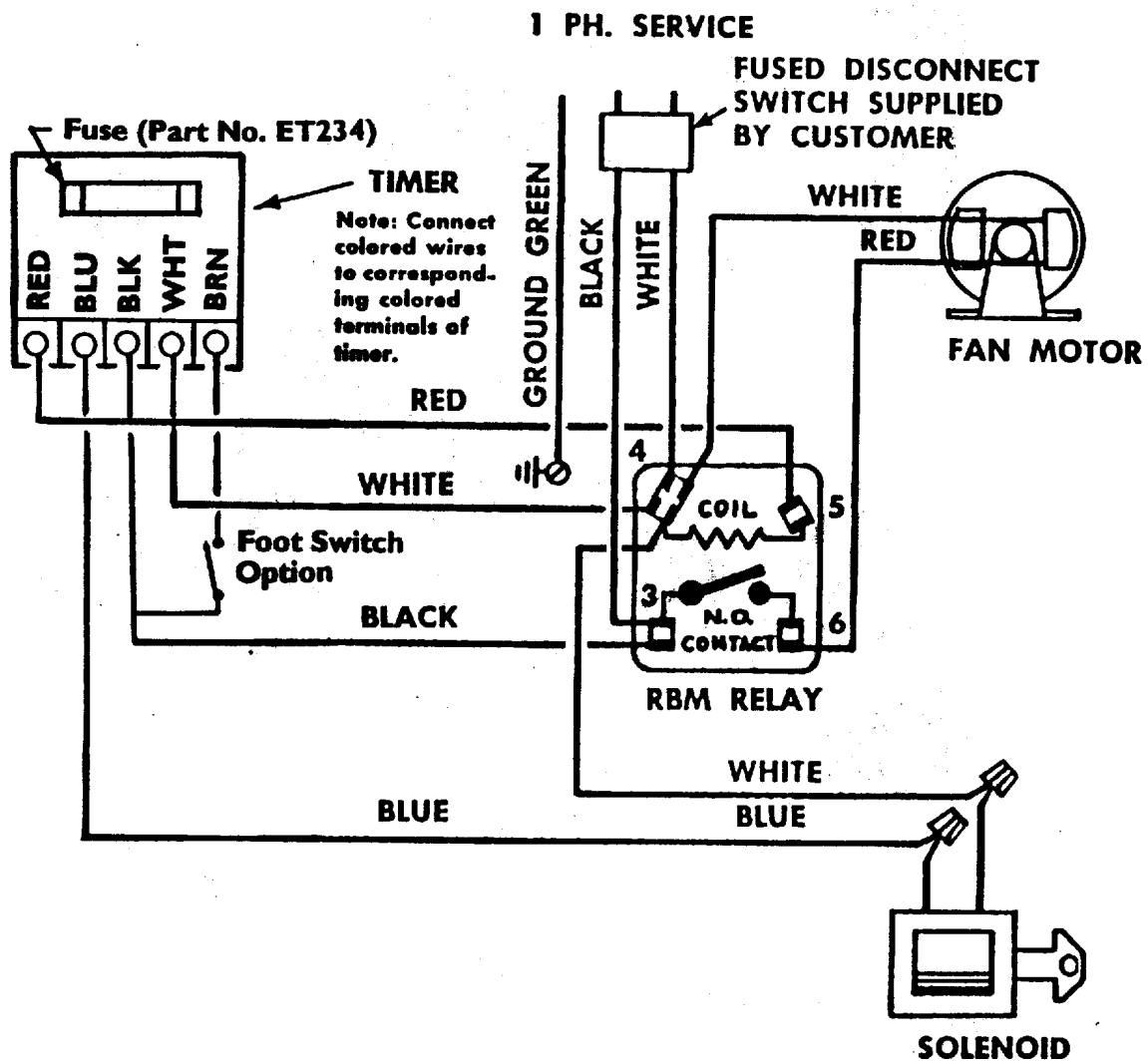
INSTALLATION INSTRUCTIONS (Refer to Wiring Diagram and Illustration)

1. Screw Lock Nut onto Pipe.
2. Place Mounting Plate over Pipe with the Wires sticking through the center hole.
3. Securely fasten the Mounting Plate with the second Lock Nut.
4. A ground wire is not required. If one exists on the Form Finisher, cut off the terminal and prepare end of wire by wrapping it with electrical tape.
5. Cover end of pipe with threaded plastic bushing.
6. Connect Wires to Terminal Block according to wire color on control (see Wiring Diagram).
7. Attach Timer Control to Plate with screws.
8. Turn on power.
9. Set "Steaming" and "Drying" timers to mid-positions. Place rocker switch in "Air Only" position to size the bag.
10. Set rocker switch in "Automatic" position to cycle through timers.
11. If machine does not operate properly, check the following: electric power, proper wiring, voltage at control, and control fuse.
12. If machine experiences further problems, consult the "Trouble Shooting Chart" in Form Finisher manual.



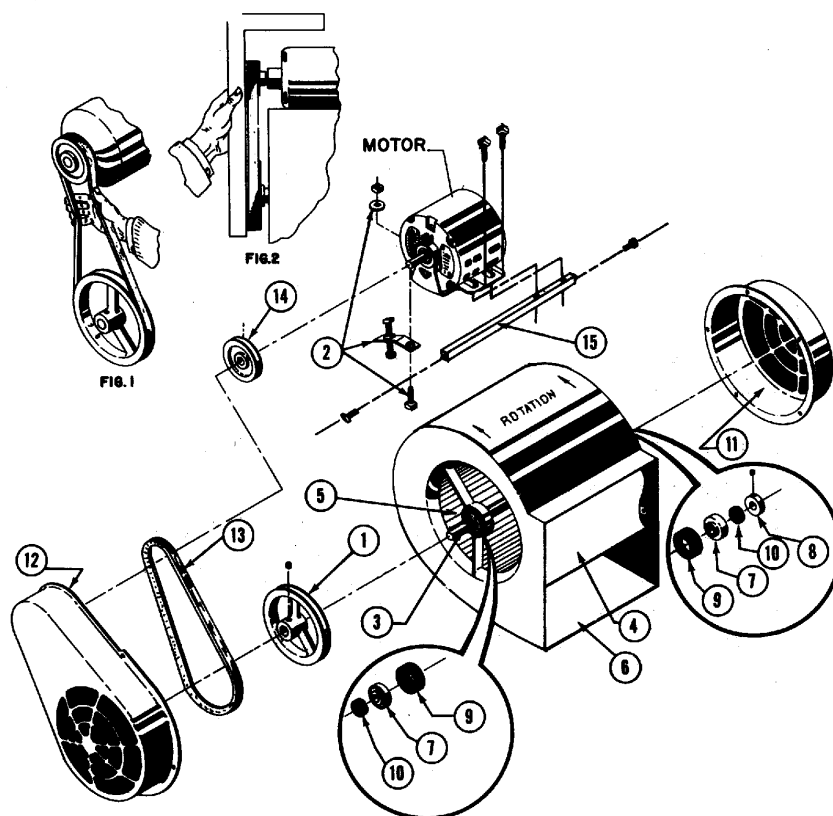
CISSELL "FF" FORM FINISHER - WIRING DIAGRAM

110 VOLT 60/50 CYCLE 1 PHASE
220 VOLT 60/50 CYCLE 1 PHASE



CISSELL FORM FINISHER BLOWER ASSEMBLY (LOW BASE) PARTS AND INSTALLATION

WHEN ORDERING PARTS OR MAKING INQUIRY, Specify Machine, Serial Number, Voltage and Current.



Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	F-734	Blower Assembly Complete less motor, guards, pulleys and belt	8	F-372	Thrust Collar (1)
1	F-363	Blower Pulley (1) 3/4" dia. hole (AK-61)	9	F-373	Bearing Insulator Cup (2)
2	PT332	Adjustment Bolt with square nut, strap pad, mounting bolt, nut and washer (1)	10	F-374	Plastic Thrust Washer (2)
3	F-366	Shaft 3/4" dia. x 16 1/2" length	11	F-375	Blower Guard (1)
4	F-367	Cut-off (with speed nuts and stove bolts) (1)	12	F-376	Belt Guard (1)
5	F-368	Blower Wheel (1)	13	TU-2317	V-Belt (1) 4L-380
6	F-369	Blower Housing (with cut-off)	14	F1034	Motor Pulley with set screw 5/8" dia. hole (AK-34)
7	F-371	Bearing Assembly	15	PT-47	Motor Support Bar
			16	MTR88	Motor 1/2 HP 115/230/60/50/1 (consult factory for other voltages)
			P-36		Allen Head Wrench, 5/32" across flats (not illustrated)

ELECTRIC MOTOR -- WHEN ORDERING, SPECIFY VOLTAGE DESIRED. Other voltages and currents available at additional cost.

INSTALLATION OF MOTOR AND BLOWER ASSEMBLY FOR CISSELL FORM FINISHERS

INSTALLATION OF BLOWER

- A. Place Blower Wheel in housing with blades at bottom cupped towards opening.
(See illustration on other side)
- B. Install cut-off sheet.
- C. Slip Shaft through center holes of Housing and Blower Wheel.
- D. Align Blower Wheel equidistant from each side of Housing with equal lengths of shaft extending beyond each side of Housing. Tighten Blower Wheel Set Screw against flat of Shaft with fingers.

NOTE

USE ONE DROP OF LIGHTWEIGHT OIL IN HOLE OF EACH BEARING BEFORE INSERTING ON SHAFT.

- E. Install Bearing Insulator, Bearing Assembly, and Plastic Thrust Washer on each end of Shaft, as illustrated. Also install Thrust Collar as illustrated. Tighten Set Screw of Thrust Collar and Center Blower Wheel Set Screw with a wrench.
- F. Slip Large Pulley on Blower Wheel Shaft against Plastic Thrust Washer with Set Screw outside. Tighten securely.

NOTE

SEE INSTRUCTIONS FOR ALIGNMENT AND PROPER BELT TENSION.

BLOWER BELT SETTING EXTREMELY IMPORTANT

Improper belt tension and misalignment develop bearing and belt failures.

FIGURES 1 and 2 deal with proper tension and correct alignment of belts and pulleys when used on blower applications.

FIGURE 1 indicates the recommended tension, determined by grasping the belt as shown and when a normal pressure is applied, a deflection of approximately 1" in the belt will occur.

If the deflection is much in excess of that indicated, belt slippage may occur and excessive belt wear can result.

INSTALLATION OF MOTOR

NOTE

CONDENSER MUST BE REMOVED BEFORE REMOVING OR INSTALLING MOTOR.

- A. Install Motor Support Bar and Adjusting Bolt on Motor before installing Motor in Housing
- B. Place Motor in position and secure with bolts in each end of Support Bar.
- C. Slip Small Pulley on Motor Shaft with Set Screw out away from Motor. Have end of Pulley flush with end of Shaft.

ALIGNMENT OF PULLEYS

NOTE

IF INSTALLATION HAS BEEN MADE ACCORDING TO INSTRUCTIONS THE BELT ALIGNMENT SHOULD BE CORRECT. IF THERE SHOULD BE ANY DOUBT, CHECK THE FOLLOWING INSTRUCTIONS.

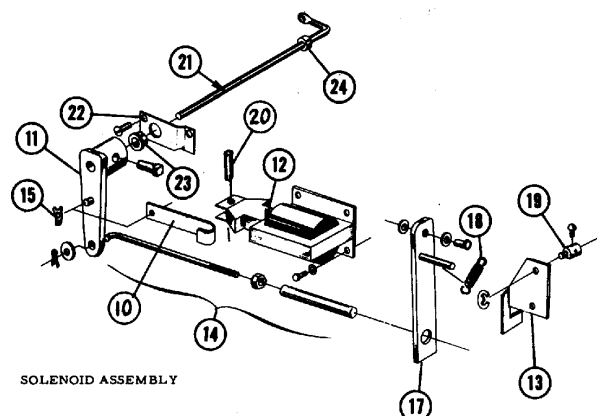
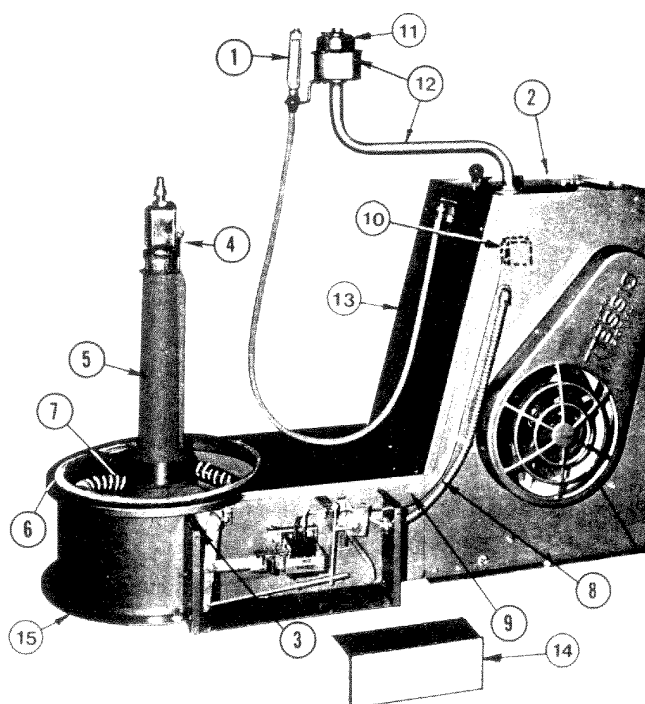
- A. Place a straight edge against face of Large Pulley and align face of Small Pulley with straight edge. Move Small Pulley for adjustment. (Fig. 2)
- B. To put tension on belt turn Adjustment Bolt Clockwise. (Use wrench) Hold bolt with wrench, tighten Square Lock Nut clockwise with a wrench.

If the deflection is somewhat less than indicated, the belt is too tight and will shorten the life of the bearing. Excessive tension will actually pull the shaft through the oil film in the bearing and allow metal to metal contact. In addition to decreasing the bearing life, it will contribute to noisy blower operation. Any defects in the belt or pulleys will be exaggerated.

FIGURE 2 deals with a recommended method for checking correct alignment of pulleys. Excessive misalignment produces increased belt wear and can produce lateral motion of the wheel and shaft to the point that considerable noise can develop.

BASE ASSEMBLY

Ref. No.	Part No.	Description
1	SG043	Water Spray Gun
2	F565	Housing W/A (specify color)
3	TU3549	Rubber Bumper (Pkg. of 3)
4	F149	Valve Pull Rod
5	F539	Steam Chamber
6	F357	Felt Air Seal
7	F1187	Steam Coil
8	5046000249	Greenfield Cable - 3/8" x 18"
9	F678	Damper Control Wire Tube
	F679	Damper Control Wire Only
10	FG235	Motor Relay (115 V.)
	FG234	Motor Relay (230 V.)
11	ET240	Electronic Timer
	ET234	Timer Replacement Fuse
12	F686	Support Pipe Assembly
	F999	Support Pipe Only
	F995	Timer Case Only
	F94	Lock Nut
	F717	Bushing
	F590	Spray Gun Holder
13	F1000	Front Cover
14	F720	Solenoid Box Cover
15	F719	Low Base W/A

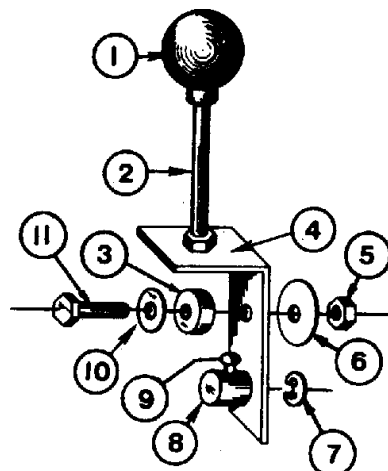


SOLENOID ASSEMBLY

Ref. No.	Part No.	Description
10	F-186	Solenoid Extension Arm
11	F-732	Steam Control Lever
12	F-739H	Solenoid 115V. Only
	F-738H	Solenoid 230V. Only
13	F-682	Throwout Cam Plate
14	F-1175	Damper Push Rod
	F-388	Hardened Tip
15	F-362	"X" Washers (Pkg. of 6)
16	F-489	"E" Rings (Pkg. of 6)
17	F-724	Throwout Lever Assembly
18	F-692	Spring
19	F-664	Swivel w/Screw and "E" Ring
20	F-990	Roll Pin (Pkg. of 6)
21	F-185	Extension Bar
22	F-254	Bearing Plate
23	TU-49	Delrin Bearing (Pkg. of 2)
24	F-215	Collar w/Set Screw

DAMPER CONTROL ASSEMBLY

Ref. No.	Part No.	Description
1	D16	Knob
2	F750	Shaft w/Nuts
3	F660	Rubber Washer
4	F663	Bracket
5	TU4934	1/4 - 20 Hex Nut (Pkg. of 6)
6	F639	Friction Washer
7	F358	"E" Ring (Pkg. of 6)
8	F664	Swivel
9	SV332	#8-32 x 3/8 Rd. Hd. Screw (Pkg. of 6)
10	TU2847	Flat Washer (Pkg. of 6)
11	RC344	1/4 - 20 x 3/4 Hex Screw (Pkg. of 6)



FORM FINISHER

SERVICE CHART

PROBLEM	CAUSE	REMEDY
(1) No Steam	1A Steam supply valve closed.	Open valve in steam supply line.
	1B Electric power "off"	Inspect electrical service for blown fuses & loose connections. Turn main disconnect "ON"
	1C Loose wires	Inspect machine wiring. Replace any loose wires and tighten any loose connections.
	1D Incorrect voltage of electrical parts	Inspect nameplate voltage and voltage on electrical parts, especially the solenoid. Replace if necessary.
	1E Incorrect service voltage or machine voltage	Check power source and be sure it matches voltage, phase, and frequency specified on machine nameplate.
	1F Defective solenoid	Inspect solenoid. Replace if it is burned, armature does not move easily, or it will not operate at rated voltage.
	1G Defective solenoid linkage	Inspect linkage between solenoid and steam valve. Adjust according to instructions. Repair or replace any defective parts. Tighten all lock nuts and set screws.
	1H Defective timer	Inspect timer and be sure the motor will run and the switches operate and carry current. If not repair or replace timer.
(2) Leaking Steam Valve	2A Solenoid linkage adjusted incorrectly	Inspect linkage and adjust according to instructions. Tighten all lock nuts and set screws.
	2B Loose valve seat	Inspect and tighten valve seat if required.
	2C Worn valve	Inspect valve parts. Replace worn parts as required.
(3) Wet Steam	3A Trap not operating	Check size and operation of trap. Repair or replace if required.
	3B Trap installed incorrectly	Check to see that direction of flow in trap is correct and that trap is in or below machine return line.

PROBLEM	CAUSE	REMEDY
(1) Wet steam (Cont.)	3C Check valve sticking or installed wrong	Check to see that direction of flow is correct and valve not sticking
	3D Strainer clogs	Inspect strainer and clean if necessary.
	3E Return line turned off	Open valve in condensate return line.
	3F Steam cycle too long	Reduce amount of time set on steam timer.
	3G Improperly installed steam lines	Check steam line installation to see that “risers” are installed as shown on installation instructions.
	3H Heavy condensate in supply line	Install a by-pass trap from supply header to by-pass condensate to return line.
	3I Machine not individually trapped	Install a separate trap for each machine.
	3J Back pressure in return line	Inspect all traps to see if one is stuck open, or improperly installed. Perform steps necessary to make return line drain by gravity to condensate return tank. See that return tank is adequately vented.
(4) Water accumulates in base	4A Steam too wet	See wet steam above
	4B Leak in finned tube or pipe fittings	Inspect machine and repair or replace any leaking parts.
	4C Leaking steam valve	See leaking steam valve above
(5) Machine steams continuously, won’t shut off	5A Defective timer	Inspect timer and be sure the motor will run and the switches operate properly. If not, repair or replace timer.
(6) Blower motor won’t start	6A Defective timer	Inspect timer and be sure the motor will run and the switches operate properly. If not, repair or replace timer.
	6B Loose wires	Inspect for loose wires. Replace and tighten all connections.
	6C Defective relay	Check to see that the relay will operate at rated voltage. If not, replace the relay.
	6D Defective blower motor	Check the motor to see if it will operate on normal nameplate electrical power. If not, replace the motor.

PROBLEM	CAUSE	REMEDY
(6) Blower motor won't start (Cont.)	6E Incorrect voltage	Check motor nameplate voltage, machine nameplate voltage and power line voltage, phase and frequency. All three must be the same.
(7) Blower motor won't stop	7A Defective timer	Check timer operation. See if timer switch operates properly. If operation is not correct, replace the timer.
	7B Defective blower relay	Check to see that the blower relay will operate properly and that the contacts will open. If not, replace the relay.
(8) Bag won't inflate to garment size	8A Pressure setting too low	Increase pressure in the bag with the pressure control lever.
	8B Pressure control defective	Inspect damper control wire, levers and pressure control lever. Be sure that all parts are connected and adjusted according to instructions. Repair or replace any defective parts.
	8C Bag size levers not properly set	Move the sizing levers until the bag is properly sized.
	8D Bag improperly installed on frame	Refer to bag installation instructions and check to see that bag strings are untangled and properly connected.
(9) Inadequate air	9A Pressure setting too low	Increase pressure in the bag with the pressure control lever.
	9B V belt loose	Check to see that belt is properly aligned and tight according to instructions.
	9C Timer setting too short	Set timer for longer steam time.
	9D Motor pulley loose	Inspect V belt pulley on motor shaft to see that it is properly positioned and set screw well tightened on shaft flat.
	9E Blower pulley loose	Inspect V belt pulley on blower shaft to see that it is properly positioned and set screw well tightened on shaft flat.
(10) Inadequate steam	10A Timer setting too short	Set timer for longer steam time.
	10B Defective solenoid linkage	Inspect linkage and adjust according to instructions. Repair or replace any defective parts. Tighten all lock nuts and set screws.

PROBLEM	CAUSE	REMEDY
(11) Excessive noise or vibration	11A Foreign object in blower wheel	Inspect wheel and remove any foreign objects and lint
	11B Blower wheel out of balance	Inspect wheel for loose balance weights, out of round or damage. Replace wheel if necessary.
	11C Blower shaft bent	Inspect to see that blower shaft is straight, if not replace it.
	11D Worn blower shaft brgs.	Check to see that shaft is tight but free to turn in brgs. If brgs. have very loose fit on shaft, replace bearings.
	11E Worn motor brgs.	Run motor with V belt removed and check by feel to see that brgs. are good. Replace motor if necessary.
	11F V belt tight or loose	Check to see that V belt is properly aligned and tightened according to instructions. Replace V belt if badly worn.
	11G Motor pulley loose	Inspect V belt pulley on motor shaft to see that pulley is properly positioned and set screws well tightened on shaft flat.
	11H Blower wheel loose on shaft	Check to see that blower wheel is well centered in the housing and that all set screws are tight in the blower wheel hub and in the pulley and set collar.